THE FUTURE OF NOAA

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U.S. Department of Commerce
1992

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OUR MISSION

NOAA, the nation's oceanic and atmospheric agency, through science and service:

Describes and predicts changes in the Earth's environment,

Manages the Nation's ocean and coastal resources,

Promotes global stewardship of the world's oceans and atmosphere.

To fulfill this mission, NOAA:

Conducts oceanic and atmospheric research to improve environmental products and services

Develops and maintains environmental data bases and disseminates environmental information products:

- Severe storm and flood warnings and weather forecasts
- Charts of U.S. waters and airspace
- River flow and water resource forecasts

- Solar and space environmental forecasts
- Climate change prediction
- Ocean and coastal analyses and assessments

Manages the marine environment by:

- Assessing the quality of the marine environment
- Conserving living and non-living marine resources
- Administering Federal-State coastal zone management programs
- Operating marine sanctuaries and estuarine reserves

Protects habitat and endangered species

Operates environmental satellites, ships, aircraft and buoys.

OUR GOALS

1. Increase the economic benefits of weather services.

Weather sensitive sectors of the economy such as agribusiness, construction, transportation, and water resources management require far more reliable mesoscale weather forecasts in the 0-48 hour range. Our ongoing program to modernize the weather service should make a significant contribution to this goal.

2. Rebuild our fishery resources.

We must now improve the precision of our science, move from hindcasting to forecasting, and slow the race for the fish by limiting access where appropriate.

3. Restore our coasts; exercise our stewardship for the marine environment.

The major ocean health problems are along the edges, not the open ocean. We must further develop our program of tracking the state of marine pollution and its sources as well as the state of living marine resources and their habitats. To achieve the latter will require significant improvement in our understanding of fisheries ecology.

Congress has given us the opportunity to develop marine sanctuaries and to restore damaged marine habitats and the marine environment with funds won from those responsible for the damage. We must develop responsible and aggressive programs in both marine sanctuaries and marine restoration. To do this, we must build a stronger base of coastal ocean science.

4. Learn enough about the ocean-atmosphere system to achieve a long-range forecasting ability.

One can mostly ignore ocean-atmosphere interactions when making one and two day forecasts. These interactions become of increasing importance as one extends the forecast time. They probably become dominant when attempting to predict "global change" with time constants of a decade or more. Our understanding of the coupled system is not adequate to provide successful forecasts except in a very limited range of situations.

5. Monitor and predict the health of our atmosphere.

I expect the pollution carrying capacity of the atmosphere is significantly less than that of the ocean. Tracking anthropogenic gases and aerosols, and understanding their sources, sinks, and chemistry must continue to be a high priority. To understanding, we must add an operational predictive capacity.

6. Respond to Environmental Emergencies.

In addition to coping with chronic environmental threats, we must expand and improve our quick response capability for monitoring volcanic eruptions, accidental releases of pollutants and radioactivity, and marine spills of hazardous materials.

OUR STRATEGIES

1. Maintain the vitality of NOAA's research and development.

We will be perceived as a relevant agency fifteen years from now only if our science remains strong in the meantime. Accordingly, the best and the brightest scientists must have modern laboratory equipment and facilities. They must have the resources and flexibility to pursue new and promising lines of inquiry as these emerge.

2. Complete the NWS Modernization and Associated Restructuring.

We must improve our observing, communications, and information processing capabilities. We must improve short-range numerical weather prediction as well as warnings. Toward these ends, we must restructure and train the staff.

3. Modernize the NOAA fleet.

We must improve our staying power and diagnostic capabilities at sea through a mix of rehabilitation, purchase, lease, and charter.

4. Develop a state of the art environmental data management and distribution system.

Other agencies and the research community depend on NOAA's data holdings for the conduct of their work. As the Nation's Earth Systems Agency, NOAA must improve its ability to capture, archive, quality control and make accessible atmospheric, oceanic and geophysical data.

5. Build a global ocean observing system.

Whether it be for tracking the health of the coastal oceans or predicting the next El Niño, we must work with the international community to develop a systematic, high quality, relevant and continuing set of ocean observations on a global basis.

6. Develop a state of the art charting system.

Rapidly expanding technology—from GPS to GIS to VLBI to absolute gravity to computer graphics to photogrammetry techniques to multi-beam sonars—provide NOAA's oldest component, the Coast and Geodetic Survey, with requirements as well as opportunities to break new ground.

7. Modernize our computing and communications infrastructure.

To reach the above goals, we must keep pace with breathtaking increases in computing power and high-speed digital communications.

Finally, NOAA is not responsible for developing all of the science and understanding necessary to conduct its mission. Much of that will come from research universities. I do believe NOAA has a responsibility to ensure the health of those universities actively engaged in programs that contribute to NOAA's mission. Continuing improvement of NOAA's relationship with the academic community remains a high priority. ❑